

Appi No. 10/760,331
Arndt, dated September 30, 2005
Reply to Office action of June 30, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Cancelled)
2. (Currently Amended): The antenna assembly of claim [[1]]41 wherein the plurality of antenna elements comprise at least one of single antennas and diversity antenna pairs.
3. (Currently Amended): The antenna assembly of claim [[1]]41 wherein the plurality of antenna elements comprise at least one of monopole antennas and patch antennas.
4. (Currently Amended): The antenna assembly of claim [[1]]41 wherein the antenna isolation configuration comprises an isolating component selected from a group including at least one of a metallic vane reflector and an RF absorber material.
5. (Currently Amended): The antenna assembly of claim [[1]]41 wherein the antenna isolation configuration is selected from a group including at least one of a polarization configuration and a geometric orthogonalization configuration.
6. (Currently Amended): The antenna assembly of claim [[1]]41 wherein the sectorized mounting structure comprises a mounting plate, and wherein antenna elements are retained along the periphery of the mounting plate.
7. (Original): The antenna assembly of claim 6 wherein the mounting plate is circular in configuration and wherein the antenna elements are retained on generally cylindrical facets that perpendicularly adjoin a peripheral edge of the mounting plate.
8. (Original): The antenna assembly of claim 7 wherein the mounting plate comprises three facets for supporting three antenna elements at respective angular separations of 120 degrees.
9. (Original): The antenna assembly of claim 7 wherein the mounting plate comprises two facets for supporting two antenna elements at respective angular separations of 180 degrees.

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10. (Original): The antenna assembly of claim 7 wherein the facets mount associated radio digital interface electronics components for each respective antenna element.

Claims 11-13 (Canceled)

14. (Currently Amended): The antenna assembly of claim [[12]]41 wherein each respective antenna assembly comprises three antenna elements, so as to provide a hexagonal antenna arrangement upon nesting the antenna assemblies.

15. (Currently Amended): The antenna assembly of claim [[12]]41 wherein each respective antenna assembly comprises two antenna elements, so as to provide a square antenna arrangement upon nesting the antenna assemblies.

Claim 16. (Canceled):

17. (Currently Amended): The wireless communications system of claim [[16]]42 wherein the plurality of antenna elements comprise at least one of single antennas and diversity antenna pairs.

18. (Currently Amended): The wireless communications system of claim [[16]]42 wherein the plurality of antenna elements comprise at least one of monopole antennas and patch antennas.

19. (Currently Amended): The wireless communications system of claim [[16]]42 wherein the antenna isolation configuration comprises an isolating component selected from a group including at least one of a metallic vane reflector and an RF absorber material.

20. (Currently Amended): The wireless communications system of claim [[16]]42 wherein the antenna isolation configuration is selected from a group including at least one of a polarization configuration and a geometric orthogonalization configuration.

21. (Currently Amended): The wireless communications system of claim [[16]]42 wherein the sectorized mounting structure comprises a mounting plate, and wherein antenna elements are retained along the periphery of the mounting plate.

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22. (Original): The wireless communications system of claim 21 wherein the mounting plate is circular in configuration and wherein the antenna elements are retained on generally cylindrical facets that perpendicularly adjoin a peripheral edge of the mounting plate.

23. (Original): The wireless communications system of claim 22 wherein the mounting plate comprises three facets for supporting three antenna elements at respective angular separations of 120 degrees.

24. (Original): The wireless communications system of claim 22 wherein the mounting plate comprises two facets for supporting two antenna elements at respective angular separations of 180 degrees.

25. (Original): The wireless communications system of claim 22 wherein the facets mount associated radio digital interface electronics components for each respective antenna element.

Claims 26-28 (Canceled)

29. (Currently Amended): The wireless communications system of claim [[27]]42 wherein each respective antenna assembly comprises three antenna elements, so as to provide a hexagonal antenna arrangement upon nesting the antenna assemblies.

30. (Original): The wireless communications system of claim [[27]]42 wherein each respective antenna assembly comprises two antenna elements, so as to provide a square antenna arrangement upon nesting the antenna assemblies.

31. (Currently Amended): The wireless communications system of claim [[16]]42 wherein the host component comprises a motherboard for supporting the radio digital interface component, the wired network connection, and the port, for providing power and network connectivity to the antenna elements.

32. (Currently Amended): The wireless communications system of claim [[16]]42 wherein the wired network connection communicates with a wireless local area network, WLAN, preferably in accordance with a suitable protocol such as the Ethernet standards under IEEE 802.3.

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33. (Currently Amended): The wireless communications system of claim [[16]]42 wherein the network interface comprises a plurality of network interfaces and wherein the port comprises a respective plurality of ports, for connecting with the respective network interfaces.

34. (Currently Amended): The wireless communications system of claim [[16]]42 wherein the port and the network interface is suitably formed on any suitable adjoining surfaces.

35. (Currently Amended): The wireless communications system of claim [[16]]42 wherein the port and network interface are comprised of a device that enables captured contact, selected from a group included a spring-loaded electrical connector and an interference-fit electrical connector.

Claims 36-38 (Canceled)

39. (Original): The wireless communications system of claim [[38]]43 wherein the antenna assembly comprises an aperture suitably shaped for receiving the support structure therethrough.

40. (Original): The wireless communications system of claim 39 wherein the port and network interface are suitably formed on the support structure and the adjoining surfaces of the aperture.

41. (New): A removable antenna assembly, comprising:

 a plurality of antenna elements for transmitting and receiving wireless signals over a plurality of wireless channels;

 a sectorized mounting structure is provided for retaining each of the plurality of antenna elements substantially in an antenna isolation configuration, so as to enable simultaneous sectorized signal communication of the antenna elements over the wireless channels; and

 at least one removable network interface for selectively enabling a signal connection between a radio digital interface component and the plurality of antennas;

 wherein the antenna assembly is adapted to be received on a host component comprising a radio digital interface electronic component, a wired network connection, and a port for enabling a selective network connection, so as to enable the antenna assembly to communicate with an electronic network;

 wherein the antenna assembly is one of a plurality of antenna assemblies that are received on the host component, for communicating with the electronic network; and.

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wherein the plurality of antenna assemblies comprise first and second antenna assemblies, and wherein the respective antenna elements of each antenna assembly are configured to nest interstitially in an inverted orientation with the antenna elements of the respective other antenna assembly.

42. (New): A wireless communications system comprising:

- a host component comprising a radio digital interface electronic component, a wired network connection, and a port for enabling a selective network connection;
- a removable antenna assembly comprising:
 - a plurality of antenna elements for transmitting and receiving wireless signals over a plurality of wireless channels;
 - a sectorized mounting structure for retaining each of the plurality of antenna elements substantially in an antenna isolation configuration, so as to enable simultaneous sectorized signal communication of the antenna elements over the wireless channels; and
 - at least one removable network interface for selectively enabling a signal connection between a radio digital interface component and the plurality of antennas;
- wherein the antenna assembly is adapted to be received on a host component comprising a radio digital interface electronic component, a wired network connection, and a port for enabling a selective network connection so as to enable the antenna assembly to communicate with an electronic network;
- wherein the antenna assembly is one of a plurality of antenna assemblies that are received on the host component, for communicating with the electronic network; and
- wherein the plurality of antenna assemblies comprise first and second antenna assemblies, and wherein the respective antenna elements of each antenna assembly are configured to nest interstitially in an inverted orientation with the antenna elements of the respective other antenna assembly.

43. (New) A wireless communications system comprising:

- a host component comprising a radio digital interface electronic component, a wired network connection, and a port for enabling a selective network connection;

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a removable antenna assembly comprising:

a plurality of antenna elements for transmitting and receiving wireless signals over a plurality of wireless channels;

a sectorized mounting structure for retaining each of the plurality of antenna elements substantially in an antenna isolation configuration, so as to enable simultaneous sectorized signal communication of the antenna elements over the wireless channels; and

at least one removable network interface for selectively enabling a signal connection between a radio digital interface component and the plurality of antennas;

wherein the host component comprises a support structure for removably receiving and retaining the removable antenna element;

wherinc the support structure is generally prismatic in shape, and has a suitably shaped sectional profile to preclude rotation of the antenna assembly; and

wherein the support structure includes a fluted portion formed along a longitudinal surface parallel to a prismatic axis, so as to allow only one preferred registration orientation of the antenna assembly.

44. (New): A system, comprising:

a first antenna assembly comprising a plurality of antenna elements for transmitting and receiving wireless signals over a plurality of wireless channels, and a sectorized mounting structure for retaining each of the plurality of antenna elements substantially in an antenna isolation configuration so as to enable simultaneous sectorized signal communication of the antenna elements over the wireless channels; and

a second antenna assembly comprising a plurality of antenna elements for transmitting and receiving wireless signals over a plurality of wireless channels, and a sectorized mounting structure for retaining each of the plurality of antenna elements substantially in an antenna isolation configuration so as to enable simultaneous sectorized signal communication of the antenna elements over the wireless channels;

wherein the first and second antenna assemblies are configured to nest interstitially in an inverted orientation with each other.

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45. (New): The antenna assembly of claim 44, wherein the antenna elements comprise at least one of single antennas and diversity antenna pairs.

46. (New): The antenna assembly of claim 44, wherein the antenna elements comprise at least one of monopole antennas and patch antennas.

47. (New): The antenna assembly of claim 44, wherein the antenna isolation configuration comprises an isolating component selected from a group consisting of a metallic vane reflector and an RF absorber material.

48. (New): The antenna assembly of claim 44 wherein the antenna isolation configuration is selected from a group including at least one of a polarization configuration and a geometric orthogonalization configuration.

49. (New): The antenna assembly of claim 44 wherein the sectorized mounting structure comprises a mounting plate, and wherein antenna elements are retained along the periphery of the mounting plate.

50. (New): The antenna assembly of claim 49 wherein the mounting plate is circular in configuration and wherein the antenna elements are retained on generally cylindrical facets that perpendicularly adjoin a peripheral edge of the mounting plate.

51. (New): The antenna assembly of claim 50 wherein the mounting plate comprises three facets for supporting three antenna elements at respective angular separations of 120 degrees.

52. (New): The antenna assembly of claim 50 wherein the mounting plate comprises two facets for supporting two antenna elements at respective angular separations of 180 degrees.

53. (New): The antenna assembly of claim 51 wherein the facets mount associated radio digital interface electronics components for each respective antenna element.